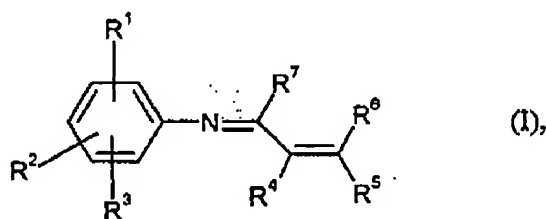


Amendment to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Claim 1. (Currently Amended) A method for reducing the aging characteristics of a rubber vulcanizate comprising admixing an Anti-aging anti-aging agents, based on organic compounds comprising azadiene groups of the general formula (I)



wherein

R¹ represents hydrogen, straight-chain or branched C₁-C₁₂-alkyl, C₁-C₁₂-alkoxy-, C₁-C₁₂-alkylthio-, C₁-C₁₂-alkylamino, di-(C₁-C₁₂-alkyl)-amino-, C₆-C₁₄-aryl-, C₆-C₁₄-aryloxy-, C₆-C₁₄-arylthio-, C₆-C₁₄-arylamino, C₂-C₁₂-heteroaryl-, C₂-C₁₂-heteroaryloxy-, C₂-C₁₂-heteroarylthio-, C₂-C₁₂-heteroarylamino,

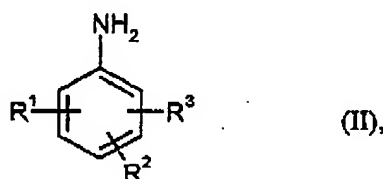
R² and R³ are the same or different and represent straight-chain or branched C₁-C₁₂-alkyl, C₁-C₁₂-alkoxy-, C₁-C₁₂-alkylthio-, C₁-C₁₂-alkyl-amino, di-(C₁-C₁₂-alkyl)-amino-, benzyl-, 1,1-dimethylbenzyl- or phenyl-,

or together form a 5-10-link aliphatic or aromatic, mono- or polynuclear ring system, which may optionally be interrupted once or more than once by heteroatoms selected from the group consisting of N, O and S,

R⁴ to R⁷ are the same or different and represent hydrogen, straight-chain or branched C₁-C₁₂-alkyl-, C₅-C₁₂-cycloalkyl- or C₆-C₁₄-aryl-, mono- or

polyunsaturated, olefinic or acetylenic, straight-chain or branched C₂-C₁₂-alkenyl-, C₂-C₁₂-alkinyl- or C₅-C₈-cycloalkenyl, or together form a 5-8-link, aliphatic ring system, which may optionally be interrupted once or more than once by heteroatoms selected from the group consisting of N, O and S,
with at least one rubber monomer and a vulcanizing agent.

Claim 2. ~~(Currently Amended) Process for the production of the anti-aging agents according to Claim 1~~ A method according to Claim 1, wherein the anti-aging agent is prepared by, comprising reacting substituted primary aromatic amines of the formula (II)



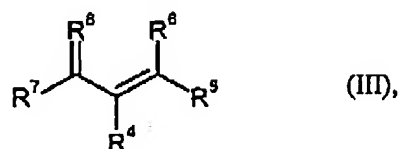
wherein,

R¹ represents hydrogen, straight-chain or branched C₁-C₁₂-alkyl, C₁-C₁₂-alkoxy-, C₁-C₁₂-alkylthio-, C₁-C₁₂-alkylamino, di-(C₁-C₁₂-alkyl)-amino-, C₆-C₁₄-aryl-, C₆-C₁₄-aryloxy-, C₆-C₁₄-arylthio-, C₆-C₁₄-arylamino, C₂-C₁₂-heteroaryl-, C₂-C₁₂-heteroaryloxy-, C₂-C₁₂-heteroarylthio- and C₂-C₁₂-heteroarylamino,

R² and R³ are the same or different and represent straight-chain or branched C₁-C₁₂-alkyl, C₁-C₁₂-alkoxy-, C₁-C₁₂-alkylthio-, C₁-C₁₂-alkyl-amino, di-(C₁-C₁₂-alkyl)-amino-, benzyl-, 1,1-dimethylbenzyl-, phenyl-,

or together form a 5-10-link aliphatic or aromatic, mono- or polynuclear ring system, which may optionally be interrupted once or more than once by heteroatoms selected from the group consisting of N, O and S, with optionally substituted

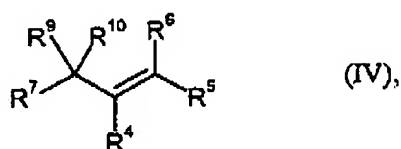
conjugated 1,3-enones and/or 1,3-enals of the formula (III)



wherein, R^4 to R^7 are the same or different and represent of hydrogen, straight-chain or branched C_1 - C_{12} -alkyl-, C_5 - C_{12} -cycloalkyl- or C_6 - C_{14} -aryl-, mono- or polyunsaturated, olefinic or acetylenic, straight-chain or branched C_2 - C_{12} -alkenyl-, C_2 - C_{12} -alkinyl- or C_5 - C_8 -cycloalkenyl, or together form a 5-8-link, aliphatic ring system, which may optionally be interrupted once or more than once by heteroatoms selected from the group consisting of N, O and S.

and wherein R^6 represents oxygen, sulfur and NR^4 group

and/or their synthetic equivalents of the formula (IV)



wherein,

R^9 and R^{10} are the same or different and represent hydroxy, chloro, bromo, straight-chain or branched C_1 - C_{12} -alkoxy, C_1 - C_{12} -alkylthio, C_1 - C_{12} -alkylamino or together form a C_2 - C_{12} -alkanedioxy- or C_2 - C_{12} -alkanediamino group.

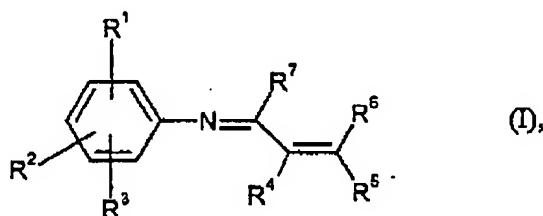
Claim 3. . . Cancelled.

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-4-

Claim 4. (Currently Amended) ~~A mixture comprising anti-aging agents according to Claim 1 and at A method according to Claim 1 further comprising admixing~~ least one additional anti-aging agent, wherein the mix ratio of anti-aging agents according to Claim 1 to at least one additional anti-aging agent is 10:1 to 1:10.

Claim 5. (Currently Amended) ~~A rubber vulcanizate produced with an anti-agent mixture according to Claim 4, mixture comprising at least one rubber monomer, at least one anti-aging agent and a vulcanizing agent, wherein the anti-aging agent is based on organic compounds comprising azadiene groups of the general formula (I)~~



wherein

R¹ represents hydrogen, straight-chain or branched C₁-C₁₂-alkyl, C₁-C₁₂-alkoxy-, C₁-C₁₂-alkylthio-, C₁-C₁₂-alkylamino, di-(C₁-C₁₂-alkyl)-amino-, C₆-C₁₄-aryl-, C₆-C₁₄-aryloxy-, C₆-C₁₄-arylthio-, C₆-C₁₄-arylamino, C₂-C₁₂-heteroaryl-, C₂-C₁₂-heteroaryloxy-, C₂-C₁₂-heteroarylthio-, C₂-C₁₂-heteroarylamino,

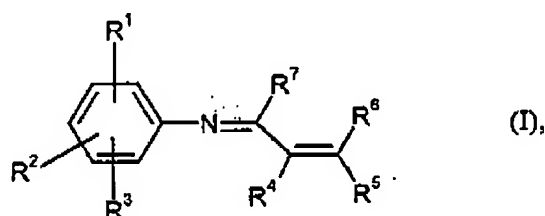
R² and R³ are the same or different and represent straight-chain or branched C₁-C₁₂-alkyl, C₁-C₁₂-alkoxy-, C₁-C₁₂-alkylthio-, C₁-C₁₂-alkyl-amino, di-(C₁-C₁₂-alkyl)-amino-, benzyl-, 1,1-dimethylbenzyl- or phenyl-,

or together form a 5-10-link aliphatic or aromatic, mono- or polynuclear ring

system, which may optionally be interrupted once or more than once by heteroatoms selected from the group consisting of N, O and S.

R⁴ to R⁷ are the same or different and represent hydrogen, straight-chain or branched C₁-C₁₂-alkyl-, C₃-C₁₂-cycloalkyl- or C₆-C₁₄-aryl-, mono- or polyunsaturated, olefinic or acetylenic, straight-chain or branched C₂-C₁₂-alkenyl-, C₂-C₁₂-alkynyl- or C₅-C₈-cycloalkenyl, or together form a 5-8-link, aliphatic ring system, which may optionally be interrupted once or more than once by heteroatoms selected from the group consisting of N, O and S.

Claim 6. (Currently Amended) A process for preparing a rubber mixture comprising according to Claim 5, comprising mixing one or more rubber monomer with an anti-aging agent according to Claim 4 and a vulcanizing agent, wherein the anti-aging agent is based on organic compounds comprising azadiene groups of the general formula (I).



wherein

R¹ represents hydrogen, straight-chain or branched C₁-C₁₂-alkyl-, C₁-C₁₂-alkoxy-, C₁-C₁₂-alkylthio-, C₁-C₁₂-alkylamino-, di-(C₁-C₁₂-alkyl)-amino-, C₆-C₁₄-aryl-, C₆-C₁₄-aryloxy-, C₆-C₁₄-arylthio-, C₆-C₁₄-aryl-amino-, C₂-C₁₂-heteroaryl-, C₂-C₁₂-heteroaryloxy-, C₂-C₁₂-heteroarylthio-, C₂-C₁₂-heteroaryl-amino.

R² and R³ are the same or different and represent straight-chain or branched C₁-C₁₂-

alkyl, C₁-C₁₂-alkoxy-, C₁-C₁₂-alkylthio-, C₁-C₁₂-alkyl-amino, di-(C₁-C₁₂-alkyl)-amino-, benzyl-, 1,1-dimethylbenzyl- or phenyl-,

or together form a 5-10-link aliphatic or aromatic, mono- or polynuclear ring system, which may optionally be interrupted once or more than once by heteroatoms selected from the group consisting of N, O and S,

R¹ to R⁷ are the same or different and represent hydrogen, straight-chain or branched C₁-C₁₂-alkyl-, C₃-C₁₂-cycloalkyl- or C₆-C₁₄-aryl-, mono- or polyunsaturated, olefinic or acetylenic, straight-chain or branched C₂-C₁₂-alkenyl-, C₂-C₁₂-alkinyl- or C₃-C₈-cycloalkenyl,
or together form a 5-8-link, aliphatic ring system, which may optionally be interrupted once or more than once by heteroatoms selected from the group consisting of N, O and S.

Claim 7. Cancelled.